

APPLICATION  
FOR  
UNITED STATES LETTERS PATENT

TITLE: PROVIDING TERMINATION BENEFITS FOR EMPLOYEES  
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FOOTNOTES

This invention relates to providing termination benefits for employees who have been non-voluntarily terminated from employment.

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in an employee's income stream after termination from one job and before the start of another one can cause disruption in life style and jeopardize his credit rating and therefore be a significant concern to him.

5 Many employers incur large costs for non-voluntary terminations of their employees. The annual costs of non-voluntary terminations may vary and in an occasional year be sharply higher than normal.

#### Summary of the Invention

10 Among other things, the invention overcomes previous concerns about the risks associated with adverse selection by employers in connection with employment termination insurance products and makes such products feasible and profitable.

15 In general, in one aspect, the invention features a computer-based method for determining a price for an insurance product under which an insurer will provide termination benefits to employees who are non-voluntarily terminated from employment by an employer. Historical  
20 information is stored about rates of termination of employees of the employer who are non-voluntarily terminated during a predetermined historical period. Other historical information is stored indicative of periods of time during which employees who are non-voluntarily terminated are  
25 expected to remain unemployed. Based on the stored historical information, an amount of money is estimated that will be required to pay termination benefits under the insurance product to employees who are non-voluntarily terminated, assuming a continuation of the historical  
30 termination rates. A price is determined for the insurance product that is smaller than the estimated amount of money so that the employer's cost for termination benefits will be

smaller under the insurance product than without the insurance product.

5 In implementations of the invention, the historical information about rates of termination includes numbers of terminated employees per year during the historical period, salary histories of the terminated employees, tenures of the terminated employees, and job classifications of terminated employees. The price for the insurance product is determined by considering different cells of employees  
10 separately, each cell including employees whose salary histories and tenures fall within predefined ranges. The price reflects expected periods of unemployment that are shorter than the historical periods of unemployment. The estimated amount of money that would be required to pay  
15 termination benefits is adjusted for expected inflation.

20 The insurance product includes a basic coverage that will provide termination benefits to no more employees than the average annual percentage of employees who were non-voluntarily terminated during the predetermined historical period, and the price determination reflects the basic coverage. The insurance product also includes an enhanced coverage that will provide termination benefits to employees who exceed the average annual percentage of employees who were non-voluntarily terminated during the predetermined  
25 historical period, and the price determination reflects the enhanced coverage. The enhanced coverage can be limited by a stop loss amount, and the price determination is based on the stop loss amount. Rights to the enhanced coverage are made available over time only in accordance with a vesting  
30 schedule.

In some implementations, the determination of price for the enhanced coverage yields a pricing formula based on

numbers of terminations and the pricing formula is applied retroactively based on actual termination experience.

5 A limit of coverage is determined for each of the cells expressed as a maximum percentage of employees in that cell who will be eligible for basic termination benefits and if the stop loss approach is used for enhanced coverage, the vested percentage amount of the enhanced coverage for each cell, and a separate sub-price is set for each of the cells.

10 In general, in another aspect, the invention features a computer-based method for managing a durational risk associated with an insurance product. Information is stored about dates of termination and historical employment experiences of employees who have been terminated from employment by the employer and are covered by the insurance  
15 product. Information about displacement duration is also stored. Based on the stored information, information is generated that is useful in assisting terminated employees in finding new jobs within periods that will reduce the impact of durational risk. Dates of reemployment of  
20 terminated employees are tracked. Payments of termination benefits are controlled based on stored dates of termination.

25 In implementations of the invention, the payments are also controlled based on individual pay period benefit amounts and cumulative benefit amounts.

30 In general, in another aspect, the invention features a computer-based method of administering termination benefits. Information is stored that identifies separate time limits of termination benefits to be paid with respect to employees belonging to different risk cells. Information is also stored about claims made for termination benefits with respect to the employees belonging to different risk cells. The limits of termination benefits

are compared with claims made for each of the risk cells, and benefits are withheld when the actual time for a risk cell exceeds the limit for the risk cell.

5 In implementations of the invention, information is stored about the periods of time that an employee must remain unemployed before termination benefits are paid. The time periods are compared with an actual time period during which an employee has remained unemployed. Benefits are withheld until the actual time period exceeds the stored  
10 time period.

Information may be received, stored, and searched about employees eligible for state unemployment insurance benefits. The eligible employees can be compared with employees who are terminated from employment by the  
15 employer. Benefits may be withheld when a terminated employee's eligibility status for state benefits matches a rule for withholding benefits.

In general, in another aspect, the invention features a computer-based method of administering basic and  
20 enhanced coverages of insurance products. The method includes calculating, storing, reporting and distributing broker commissions, claims administration fees, IP override, fronting fees, carrier overhead, and premium tax, and calculating and reporting required risk based capital.

25 In general, in another aspect, the invention features a computer-based method for use in reducing a durational risk associated with an insurance product. Information is stored that indicates receipt of notification of non-voluntary termination of an employee covered by the  
30 termination benefits. Information is also stored that can be assembled into prescribed interviews of terminated employees. In response to the stored information about notification of non-voluntary termination, a prescribed

interview is provided to aid in accumulating information useful in placing the employee in a new job. The results of the interview are sorted and stored.

5 In general, in another aspect of the invention, the durational risk is reduced by storing information about the qualifications of a terminated employee for reemployment, storing information about available jobs, and matching the stored information. Retraining seminar may also be provided.

10 Among the advantages of the invention are one or more of the following. For the employer, the insurance preserves cash flow, may reduce termination costs, makes the costs more predictable, helps manage earnings, protects against potentially catastrophic expenses associated with  
15 reductions in force, reduces exposure to displaced employee litigation, maintains current year deductibility of premiums paid, and enhances the image of the employer as a good corporate citizen. To the covered terminated employee, the invention provides salary continuation for a specified  
20 period of time during unemployment and results-oriented job placement services. To the insurer, the invention provides a needed coverage to a substantial global market at a quantifiable risk and competitive price. Risk of adverse selection by employers is reduced both with respect to the  
25 employer's employee pool as a whole, and with respect to individual cells of employees. The manager of the delivery of benefits receives a fee for services and a possibility of additional profit if it successfully reduces the period of unemployment after the termination.

30 Other advantages and features will become apparent from the following description and from the claims.

### Brief Description of the Drawing

Figure 1 illustrates an analysis of risk.

Figure 2 illustrates employee cells.

Figure 3 is a block diagram of parties to and  
5 processes of underwriting.

Figure 4 is a block diagram of parties to and  
processes of claim administration.

Figures 5, 6, and 7 are flow charts.

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### Description of the Preferred Embodiments

10 A concern of insurers (underwriters) with respect to  
any insurance product is so-called adverse selection. If  
buyers of the insurance can manipulate the nature or timing  
of events that trigger coverage under the insurance, the  
insurer runs an intolerable risk that buyers will take  
15 advantage of that possibility. Certain kinds of insurance  
have not been offered because of such adverse risk concerns.

Employment termination insurance, for example, has  
been viewed as carrying such an adverse selection risk if  
the premium is based on some calculated rate of terminations  
20 of all employees, e.g., an average historical termination  
experience for all employees of the employer.

Employers often plan and are in control of the  
nature and timing of major termination occurrences. They  
could buy such insurance with the intention of receiving  
25 coverage payments for a planned major termination event  
while paying a relatively small premium based on an assumed  
rate of terminations that reflects the employer's historical  
experience. Employers would also be able to plan in advance  
and control termination occurrences that are not



extraordinary in terms of the number of people being terminated, but are extraordinary in terms of salaries.

The effect of adverse selection can be reduced enough to yield a viable insurance product by changing the way in which the risks are isolated, the premiums are calculated, and the benefits paid. One way to reduce the adverse selection risk is to divide the coverage into a base coverage and an enhanced coverage, and price the base and enhanced coverages in different ways. Segmenting the employees of an employer into cells by tenure, salary, and class also provides risk isolation. The coverage then is priced separately for each cell based on the historical termination experience for that cell. Coverage limits are applied to each cell separately.

As seen in Figure 1, historical non-voluntary termination information for a wide range of employers shows three categories of insurance risk. The same analysis also applies to the employee pool of an individual employer, and to employee cells within the employee pool of a given employer.

A base risk 20 is associated with normal non-voluntary terminations that occur continually in the ordinary course of business for any established/mature employer. This base risk varies little over many years and typically represents about 1.67% terminations per year. Because the variability is small, this risk can be accurately quantified as the average annual non-causal terminations experienced by the employer during an historical five-year period.

An aberrant risk 22 is associated with occasional short-lived "spikes" with moderately higher terminations than for the base risk. These could be associated, for example, with a termination scenario that involves a plant



salaries, job classes (e.g., secretary, senior manager, labeled A, B, C, D), and range of tenure in years (e.g., 0 - 5 years) to which its members belong. (An employee must have three years of tenure to be vested and qualified for coverage.)

5 The coverages provided by the insurance are defined in the policy. Before the insurance contract is signed, the employer specifies the amount and duration of benefits to be paid to qualifying employees in each cell who are terminated  
10 unilaterally by the employer for non-causal reasons. For example, senior managers with 5 to 10 years of tenure and salaries between 50,000 and 75,000 may be given 26 weeks of termination benefits. The weekly termination benefit is set at a percentage (e.g., 100%) chosen by the employer at the  
15 time the insurance is bought.

The policy sets a maximum limit on the number of employees in each cell for whom base coverage will apply. The maximum is based on a moving five-year historical average base risk experience for terminations of that cell.  
20 For example, if the cell described above had an historical annual average termination rate of 1.67%, the policy would provide termination benefits for as many as, but no more than, 1.67% of the employees in that cell during the first year of the policy. At the end of the first year, and each  
25 subsequent year, the historical average percentage is recomputed based on the previous five years (and in that sense in a running average). In determining the average, if any, of the previous five years has a rate that is more than 10% higher than the running average (e.g., 10% in one year  
30 when the running average is 1.67%) that percentage is reduced to 1.1 in the running average (1.1 x 1.67, in the example) and the running average is recomputed.

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The policy also may set a maximum limit on the number of employees in each cell for whom (enhanced) coverage will apply. The maximum is based on a stop loss percentage selected by the employer, (e.g., 5% or 15%). The stop loss percentage is conceptually attributable to aberrant and catastrophic risks but is not necessarily the same as any historically determined percentage. If the chosen stop loss percentage is 5% in our example, the extended coverage of the policy would provide termination benefits for 3.33% (5% minus the 1.67% already covered by base coverage) of the employees in that cell each year.

However, in one implementation approach, the maximum termination benefits for extended coverage are not fully available in the first year of the policy. Rather they are phased in (vested) over several years. For example, in the first year, only 20% of the 3.33% would vest. So in the first year, the maximum benefit under extended coverage for the cell would be 0.66% of the number of employees in that cell. The reason for requiring vesting is to reduce the risk of adverse selection by preventing an employer from reaping the full coverage for a planned aberrant episode in, for example, the first year after buying the policy.

An alternative way to provide extended coverage while reducing the adverse selection risk is to price the extended coverage retroactively. In this approach, the employer is given the pricing formula before buying the policy. Full enhanced coverage begins immediately, but the employer is charged after the fact, at the agreed pricing, for years in which the termination experience exceeds the base coverage and falls within the extended coverage.

The premium to be paid by the employer for the insurance policy is determined by adding cell premium

amounts determined for each category of coverage (base and extended) of the employee benefit cells of that employer. The premium amount for a cell is based on the benefit amounts and durations for that cell, the historical  
5 experience for that cell, a deductible amount and the stop loss percentage chosen by the employer, if applicable.

The premium amount for each category of coverage is a fraction of the termination expense that the employer would otherwise incur if terminations occurred at the  
10 historical rate (for base coverage) or at the stop loss rate (for extended coverage if applicable). The fraction is expressed in terms of the number of weeks of coverage for which the employer is charged in the premium compared with the stated number of weeks of benefit.

For example, if the historical base coverage  
15 experience is 1.67% and the termination benefits extend for 26 weeks, the premium could be set based on 18 weeks so that the employer pays 18/26 of 1.67% of the average salary of employees in that cell multiplied by the number of employees  
20 in the cell, for base coverage, net of unemployment insurance benefits received by the terminated employee.

A similar computation applies to the extended coverage with respect to the 3.33% (in the example discussed above) except that the numerator may be a higher number of  
25 weeks, say 20 weeks, to accommodate the fact that the duration of unemployment may be somewhat longer in aberrant or catastrophic termination scenarios than for the base risk.

By making the premium computation on a cell by cell  
30 basis, high salary cells will bear higher premium amounts for coverage that is limited as to those cells. This reduces the risk of adverse selection by an employer with

respect to planned termination scenarios involving only high salary employees.

5 If the time it takes for an employee to become re-employed is the same as the benefits period (e.g., 26 weeks), the insurer would lose money because the premium only contemplates that benefits will last for a shorter period (e.g., 18 weeks). The result of the pricing approach is that the employer gets a reduction in his average annual termination expense. The insurer would undertake the risk  
10 (called a durational risk) that termination benefits will actually be greater than the premium. For example, assuming a 26 week benefit, the premium may only be based on 18 weeks. The insurer could also benefit from the upside of reemployment experience that is better than 18 weeks. The  
15 insurer, at its option, could choose to assume deceptive risks at different points in the 26 week period, for example, during the final two weeks.

However, in implementing the insurance product, the insurer may delegate both the downside risk and the upside  
20 potential implicit in the pricing strategy to a claims administrator. The insurer would pay the claims administrator exactly the number of months of benefit payments reflected in the premium amount (e.g., 18 weeks) for each terminated employee, regardless of the actual  
25 number of weeks of unemployment. The claims administrator would bear the obligation to pay the employee for some or all of the full coverage (e.g., until the employee is re-employed, up to 26 weeks) and would receive the profit and bear the loss of any difference between the actual amounts  
30 paid to the employee (until he is re-employed) and the premium-linked amounts received from the insurer.

An example of an insurance policy that provides such benefits is attached as Appendix A and incorporated by reference.

Additional factors affect the coverage provisions of the policy and the pricing of the premium. The pricing model must take account of the tax rate on the premium, the fronting fee paid to the insurance entity, the expenses of administering claims, the fee to the claims administrator, overhead of the insuring entity including IP royalties, profit that is expected to be reaped on the premium by the insurer, costs of reinsurance, income from investments of funds, the government managed unemployment insurance benefits rates, the FICA and FUTA tax rates to the employer, the workmen's compensation premium rate of the employer, and the cost of outplacement services.

An employee who is placed in a new job and then either loses it or elects to leave will return to the coverage pool for the remaining benefit period or until he is re-employed, but the period during which he was not being paid by the claims administrator represents potential profit to the claims administrator.

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The pricing can be done using a model created as a Microsoft Excel spreadsheet. An example of such a model that uses the inputs discussed above to generate a premium for the product is attached as Appendix B in the form of a CD-ROM. The file name is TEMPLATE.XLS and it can be run on Microsoft Excel 97, a copy of which is also being provided. Other kinds of software could be used to compute the insurance prices. The software could be run on any conventional personal computer or on any variety of other computer platforms. The software and all of the data needed

for the pricing computations could be stored on a hard disk drive or other media.

As seen in Figure 3, the insurance policy is sold by a broker 34 to an employer 30, which has qualified employees 32 who are covered by the termination benefits. Before the sale may be completed, the employer provides underwriting data 36 to an insuring entity 40 and the insuring entity 40 provides a price 38 (premium) to the employer. The underwriting data is loaded onto a storage medium in a computer controlled by the insuring entity and is used by the pricing model to generate the price. The insuring entity gives the broker authority 54 to use its name and make the sale on its behalf.

The insuring entity 40 provides a variety of services associated with the underwriting process. It does market research to identify prospects and does preliminary qualification of targets. It helps with preparing preliminary sales calls and with the initial presentation, including assistance with selection of variables and benefits. The insuring entity also gathers the historical data specific to the prospective customer. It develops the pricing and makes the underwriting decision. It helps with follow-up presentations including cost/service analyses. Once the underwriting decision is made, the insuring entity provides the policy and other documentation, activates the account, books claim liabilities, tracks amounts, frequency and duration of, and either directly or through the claims administrator pays claims, assists in providing retraining (when appropriate) and provides job search assistance, e.g., through a claims administrator.

The underwriting data includes historical termination information about each cell of employees. The



data also includes choices made by the employer that affect the computation of the price. The choices may include the weeks of benefits (e.g., 26 weeks) that will be given to employees in each of the cells, the percentage of salary which will define the benefits, a deductible amount for enhanced coverage, and a stop loss percentage, if applicable.

The underwriting data is stored in computer readable form on a storage medium and used on a computer as part of the pricing model. The insuring entity uses the underwriting data to generate the price based on subprices generated for each of the employee cells separately.

Once the price has been set and the employer agrees to buy the policy, a contract 50 (Appendix A) is provided by the insuring entity to the employer. In return, the employer pays an annual premium 52.

The insuring entity 40 can be structured in a wide variety of ways either within one company or by agreements among companies. In the example shown in Figure 3, a lead insurer 56 issues the policy and receives the premium but then cedes portions of the risks and premiums to a guarantor 58 and to a reinsurer 60. Excesses 61 of premiums over benefits paid are invested by an investment manager 62. The insuring entity uses computer software to track the effectiveness of the investment manager.

The insurance policy provides base coverage and enhanced coverage (if the employer so chooses). The lead insurer retains the obligation to pay benefits on a percentage (e.g., 10%) of the base coverage, retains part of the premium as compensation for that risk, and receives a fronting fee of, say, 1% for its role in organizing the insurance entities.

1 The lead insurer cedes a percentage (e.g., 90%) of  
the base coverage risk and a percentage (e.g., 10%) of the  
enhanced risk obligation to the guarantor and pays, e.g.,  
89% of the base premium and 10% of the enhanced premium to  
5 the guarantor. The remaining 90% of the enhanced coverage  
risk is ceded to the reinsurer and 90% of the premium is  
paid to the reinsurer to compensate for its assumption of  
that risk.

10 The guarantor lends the use of its name (and  
implicitly its brand identification and reputation) to the  
lead insurer. The guarantor uses an underwriting model,  
described below, to develop the prices based on the  
historical termination data for an employer. The lead  
insurer licenses 100 a claims administrator 68 to manage the  
15 payment of benefits and the delivery of placement services.  
The claims administrator could be part of the insuring  
entity. If not, the lead insurer also pays the claims  
administrator an administrative fee 102.

20 As seen in Figure 4, during the policy period,  
claims management and benefit payments are handled  
cooperatively by the claims administrator, the lead insurer  
56, the employer 30, staffing agencies 70, and training  
provider, that have arrangements with the claims  
administrator.

25 When the employer 30 non-voluntarily terminates an  
employee 32, notice of displacement 33 and a copy of the  
appropriate employee file is sent from a computer 31 of the  
employer electronically to a computer 57 of the lead  
insurer. The information 35 is promptly forwarded  
30 electronically from the lead insurer's computer to a  
computer 69 of the claims administrator.

Each time a payment is made, an invoice is automatically generated and passed from the administrator's computer to the lead insurer's computer. Funds to cover the benefits are then returned electronically to the claims administrator. The reimbursement by the lead insurer of its percentage of the benefit obligations continues even after the employee returns to work. If that occurs earlier than the end of the benefit period, the subsequent reimbursement payments by the lead insurer are kept for the account of the claims administrator. This gives the administrator a strong incentive to get each terminated employee re-employed at the earliest possible time.

Payments and services to the employee continue automatically until either the benefit period defined for that employee's cell ends, or the employee finds another job if that occurs sooner. If so, notice of the new employment is given to the claims administrator's computer and is passed along electronically to the staffing agency computer as an instruction to cease work.

To obtain benefits, the employee must also promptly give a notice to activate service benefits 71 to the claims administrator 68. The notice to activate is matched in the computer 69 with the employee file that has already been received from the lead insurer, which initiates the steps required to provide the termination benefits. The computer 69 is arranged to provide resume information, employment files, and notices 79 automatically to approved staffing agencies 70, which contact the employees and provide placement and other services aimed at helping each employee to find a new job, reporting each client contact to the claim administrator. The claims administrator may also provide assistance in placement. The fees of the staffing agencies are paid by the claims administrator.

The responsibilities of the claims administrator include assigning an individual claim administrator to each terminated employee. The claim administrator has direct telephone contact with the terminated employee using a pre-scripted interview and develops a standard resume. A database search is done for possible matches with the employee's skills. Interviews may be scheduled. Training may be recommended and scheduled. Benefit payment authorizations are also reviewed and authorized.

Based on the day of termination, the employee cell to which the employee belongs, and the benefits to be provided (all of which are provided to computer 69 by the lead insurer), computer 69 automatically determines the dates and amounts of benefit payments to be made and mails checks or makes direct electronic deposits for the employee. The amounts of the payments are reduced by the amounts of state unemployment benefits whether applied for and received or not. Information 77 about those would have been initially loaded in computer 69 from as part of the original claim management software.

The main business strategy of the claims administrator is to reduce the period of unemployment (displacement duration) so that it can maximize, as its profit, the difference between the coverage payments received from the insuring entity and the benefit amounts paid to covered, terminated employees. To achieve this, the claims administrator maintains strategic relationships with specialty staffing service firms and specialty training companies, which provide temporary, contract, and permanent placement of professional and technical employees and place a high value on retraining.

Flow charts can be used to illustrate methods of the invention.

Referring to Figure 5, determining a price 300 for a product includes the following sequence. Historical  
5 information is stored 302 about rates of termination of employees of the employer who are non-voluntarily terminated during a predetermined historical period. The information includes numbers of previously terminated and processed employees 304, salary histories 306, tenures 308, and job  
10 classifications 310. Historical information is also stored 311 indicating periods of time during which employees who are non-voluntarily terminated are expected to remain unemployed 311, including unemployment durations of terminated employees 312.

15 Limits of basic and enhanced coverage for each employee cell are established 314 using information provided by the insured.

The pricing process considers enhanced and basic coverages separately for each cell 316. An estimate is made  
20 318 of the amount of money that will be required to pay termination benefits under the basic insurance product to employees who are non-voluntarily terminated, assuming a continuation of the historical termination rates.

The enhanced coverage can be based on the agreed  
25 stop loss amount 320. The price determined to this point for each cell is then adjusted for expected inflation 322. The price for the insurance product is set to be smaller than the estimated amount of money 324 so that the employer's cost for termination benefits will be smaller  
30 under the insurance product than without the insurance product.



For example, the coverages could be split explicitly into three parts, instead of bundling them into two coverages. The three coverages could be basic, aberrant, and catastrophic.

5           What is claimed is:

FOOTNOTES